

REMARKS

Claims 1 through 21 were presented for examination and were rejected. Claims 1 and 6 have been amended, and claims 2-5 and 7 have been canceled without prejudice.

The applicants respectfully submit that the claims as amended overcome the rejections, and the applicants request reconsideration in light of the following comments.

35 U.S.C. 102 Rejection of Claims 1, 3, 4, 7-11, 13-21

Claims 1, 3, 4, 7 through 11, and 13 through 21 were rejected under 35 U.S.C. 102(b) as being anticipated by Kojima et al., U.S. Patent 5,338,780, issued August 16, 1994 (hereinafter "Kojima"). The applicants respectfully submit that the claims, as amended, overcome the rejection. Note that claims 3, 4 and 7 have been canceled.

Claim 1, as amended, recites:

1. A tracking resistant resin composition comprising:
 100 weight parts of at least one resin selected from the group consisting of polyolefine resins and copolymers of different olefins;
0.3 to 1.0 weight parts of a carbon black;
 0.1 to 2 weight parts of a UV and light stabilizer; and
 0.1 to 2 weight parts of an antioxidant; wherein
 the polyolefine resin is at least one of LDPE (low density polyethylene), MDPE (middle density polyethylene) and HDPE (high density polyethylene) which have a *melt index of 0.1 to 1.0g/10min*, and wherein
 the carbon black has an average particle size of *60 nm or less, a surface area of 80 to 200 m²/g and a dibutyl acrylate adsorption of 100 to 200 cm³/100g.*
(emphasis supplied)

Deleted: resins

Nowhere does Kojima teach or suggest, alone or in combination with the other references, what amended claim 1 recites. Instead, Kojima discloses a polyolefin resin (A) containing carbon black that is blended with (B) a phenolic compound of formula (I), (C) an organic sulfur compound such as (II-1) or (II-2), (D) a piperidine compound, and (E) an epoxy compound of Bisphenol A type glycidyl ether.

A first distinction between the present invention and Kojima is that the present invention restricts the range of the melt index of the polyolefin resin to 0.1~1.0g/10min for

increasing extrusion processability. Meanwhile, Kojima fails to teach or suggest these features.

A second distinction between the present invention and Kojima is that the present invention comprises carbon black, where the carbon black is 0.3 to 1.0 weight parts and has an average particle size of 60 nm or less, a surface area of 80 to 200 m²/g, and a dibutyl acrylate adsorption of 100 to 200 cm³/100g. Meanwhile, Kojima discloses carbon black with a particle size less than 30 µm may be used in amounts of 0.05-10%w/w.

In the present invention, the range of the size and amounts of carbon black is restricted for increasing the tracking resistance. Meanwhile, according to Kojima (column 2, lines 59-63), if "the amount of carbon black is less than 0.05w/w%, then the desired effect may not be adequately achieved, and if it is over 10w/w%, then there may tend to be a loss in the mechanical strength."

For these reasons, the applicants respectfully submit that the rejection of claim 1 is overcome.

Because claims 8 through 11 and claims 13 through 21 depend on claim 1, the applicants respectfully submit that the rejection of them is also overcome.

35 U.S.C. 103 Rejection of Claims 2, 5, 6

Claims 2, 5, and 6 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima et al., U.S. Patent 5,338,780, issued August 16, 1994 (hereinafter "Kojima") in view of Lee, U.S. Patent 6,197,852, issued March 6, 2001 (hereinafter "Lee"). The applicants respectfully submit that the claims, as amended, overcome the rejection. Note that claims 2 and 5 have been canceled.

Claim 6, as amended, recites:

6. The tracking resistant resin composition according to claim 1, in which *the carbon black has an average particle size of 30nm or less, a surface area of 100 to 170 m²/g and a dibutyl acrylate adsorption of 100 to 150 cm³/100g.*

(emphasis supplied)

Nowhere does Kojima or Lee teach or suggest, alone or in combination with each other, what claim 6 recites. Instead, Kojima discloses a polyolefin resin (A) containing carbon black that is blended with (B) a phenolic compound of formula (I), (C) an organic sulfur compound such as (II-1) or (II-2), (D) a piperidine compound, and (E) an epoxy compound of Bisphenol A type glycidyl ether. Meanwhile, Lee discloses compositions based

on LPDE, MDPE, or HDPE with a melt index of 0.1~100g/10min, and the size of carbon black being in the range of 10-60 nm to effectively disperse carbon black.

A distinction between the present invention and the cited references is that the present invention restricts the range of the melt index of the polyolefin resin to 0.1~1.0g/10min for increasing extrusion processability. Meanwhile, Kojima fails to teach or suggest these features. Lee shows the melt index in the range of 0.1~100g/10min; however, this range of the melt index corresponds to all materials. Furthermore, the range of the melt index between the present invention and Lee is quite different.

In addition, in the present invention, the range of the size and amounts of carbon black are restricted for increasing the tracking resistance. Meanwhile, according to Kojima (column 2, lines 59-63), if "the amount of carbon black is less than 0.05w/w%, then the desired effect may not be adequately achieved, and if it is over 10w/w%, then there may tend to be a loss in the mechanical strength." Furthermore, the difference of the size of carbon black between Kojima and Lee is very large.

As is stated in the Office action, the surface area and particle size are related. However, the effect caused by the difference in the sizes of the carbon black particles is quite different. Therefore, it would not have been obvious to one of ordinary skill in the art to include carbon black having a particle size of 10-60 nm of Lee in the compositions of Kojima.

Because claim 6 depends on claim 1 and because Lee fails to cure the deficiencies of Kojima as related to claim 1, the applicants respectfully submit that the rejection of claim 6 is also overcome.

35 U.S.C. 103 Rejection of Claim 12

Claim 12 was rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima et al., U.S. Patent 5,338,780, issued August 16, 1994 (hereinafter "Kojima"). The applicants respectfully submit that the claim overcomes the rejection

Claim 12 recites:

12. The tracking resistant resin composition according to claim 11, in which the 2,2,6,6-methyl piperidine is at least one selected from the group consisting of 2,2,6,6-pentamethyl-4-piperidinyl, N-butyl-2,2,6,6-tetramethyl-4-piperidine amine, hexanediyl(2,2,6,6-tetramethyl-4-piperidinyl)imino and 4-hydroxy-2,2,6,6-tetramethyl-1-piperidine.

(emphasis supplied)

Deleted: type compound

Nowhere does Kojima teach or suggest, alone or in combination with the other references, what claim 12 recites.

Because claim 12 depends on claim 1 and because the rejection of claim 1 is overcome, the applicants respectfully submit that the rejection of claim 12 is also overcome.

Request for Reconsideration Pursuant to 37 C.F.R. 1.111

Having responded to each and every ground for objection and rejection in the Office action mailed January 5, 2006, applicants request reconsideration of the instant application pursuant to 37 CFR 1.111 and request that the Examiner allow all of the pending claims and pass the application to issue.

Should there remain unresolved issues the applicants respectfully request that Examiner telephone the applicants' attorney at 732-578-0103 x11 so that those issues can be resolved as quickly as possible.

Respectfully,
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